

MARKED UP VERSION OF AMENDED CLAIMS

14. (amended twice) A method of genotyping plants of the *Triticum aestivum* species and the genus tribe *Triticeae* at a microsatellite locus, the method comprising

a) amplifying chromosomal DNA with one or more oligonucleotide primer pairs specifically hybridizing to said locus of a region of said chromosomal DNA, wherein said region of the DNA comprises a repeated dinucleotide motif comprising at least one of the following selected from the group consisting of (GA:CT)_n, (GT:CA)_n, (AT:TA)_n, where n ≥ 10, to obtain an amplification product,

b) wherein each primer pair consists of a first oligonucleotide of SEQ ID NO. x and a second oligonucleotide of SEQ ID NO. x+1, and wherein x = 1, 3, 5, 7, 9, 11, 13, 15, 17, 19; and

c) size fractionating the amplification product to provide a measure of the said motif of the chromosomal DNA between said primer pairs,

wherein the size of the amplification product is polymorphic for said locus and provides a marker for genotype for genotyping said plants.